

Notice of Allowability

Application No.

10/814,304

Applicant(s)

MIYAJI ET AL.

Examiner

Luis Roman

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/18/06.
2. ☒ The allowed claim(s) is/are 1, 4, 5 and 8.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/18/06 has been entered.

Reasons for Allowance

Examiner acknowledges a submission of the amendment filled on 12/18/06. Claims 4 & 8 have been kept original, claims 1 & 5 have been amended and claims 2-3, 6-7, & 9-10 have been cancelled. No new claims were added. It also included remarks/arguments.

Amendments and arguments have overcome rejection

The following is an examiner's statement of reasons for allowance.

Claims 1, 5: the closest references are: "Wafer Stage For Wafer Processing Apparatus And Wafer Processing Method" Kanno et al. US Patent 6646233 issued on November 11, 2003, "Electrostatic Chuck Member And Method Of Producing The Same" Harada et al. US Patent 6771483 issued on August 3, 2004 & "Electrostatic Chuck" Watanabe et al. US Patent 5625526 issued April 29, 1997.

Claim 1: Kanno et al. teaches an electrostatic chuck (abstract) comprising: a substrate (abstract <ceramic plate>); a dielectric layer formed by thermal spraying on an

Art Unit: 2836

upper face of the substrate (col. 15 lines 09-17), an internal electrode embedded in the dielectric layer (col. 4 lines 51-54 & Fig. 7 element 17); a feeder terminal portion extending from a lower face of the substrate to the internal electrode (col. 10 lines 1-18 & Fig. 7 elements 20<shaft>, 43<spring>, 50<guide>, 49<bolt>, 51<plug>, 17<electrode>); and an electrode provided in the feeder terminal portion (Fig. 7 element 51), wherein the feeder terminal portion is composed of members which are fixed to each other by brazing (col. 15 lines 09-17<base 67 & dielectric 68 are integrated together by brazing,>), diffusion bonding, or soldering, and wherein the feeder terminal portion and the substrate are fixed to each other by mechanical joining (Fig. 7 elements 15, 49, 50, 51).

The prior art of record does not disclose:

The dielectric layer has a substrate side recess formed on a surface of the dielectric layer, the surface being located proximate to the feeder terminal portion; the terminal electrode has an exposed portion which is exposed to the feeder terminal portion in the substrate side recess, the substrate has a substrate side electrode provided at the exposed portion of the internal electrode in the substrate side recess so as to be apart from the dielectric layer and to project from the substrate side recess to the electrode of the feeder terminal portion, the feeder terminal portion having the electrode and the substrate having a side electrode are removably fixed to each other by mechanical joining, and in the mechanical joining, the substrate side electrode is fit into the recess off the feeder terminal portion and contacts the electrode of the feeder terminal portion.

Claim 5: Harada et al. discloses a production method for an electrostatic chuck comprising steps of: forming a first dielectric layer by thermal spraying on an upper face of a substrate; forming an internal electrode by thermal spraying on an upper face of the part of an electrode and the first dielectric layer, forming a second dielectric layer by thermal spraying on an upper face of the internal electrode (col. 4 lines 44-56 & Fig. 1 elements 3, 4, 5).

Art Unit: 2836

Watanabe et al. teaches providing a part of an electrode and a jig on a substrate (col. 11 lines 31-42 & Fig. 11) followed by removing the jig from the substrate (col. 12 lines 10-21 & Fig. 11).

Kanno et al. teaches mounting a feeder terminal portion to the substrate by mechanical joining (Fig. 7 elements 15, 49, 50, 51).

The prior art of record does not disclose: the feeder terminal portion having a recess and an electrode provided in the recess, the substrate having the substrate side electrode, in the step of forming the internal electrode, a substrate side recess is formed on a surface of the dielectric layer, the surface being located proximate to the feeder terminal portion, the internal electrode has an exposed portion which is exposed to the feeder terminal portion in the substrate side recess, and the substrate side electrode is provided at the exposed portion of the internal electrode in the substrate side recess so as to be apart from the first dielectric layer and to project from the substrate side recess to the electrode of the feeder terminal portion, and in the mechanical joining, the substrate side electrode is fit into the recess of the feeder terminal portion and contacts the electrode of the feeder terminal portion.

As a result for claims 1, 4-5 & 8 the allowability resides, at least in part, in the above-described limitations, in combination with the other elements of each of the claims, which has not been disclosed in or rendered obvious by the Prior Art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

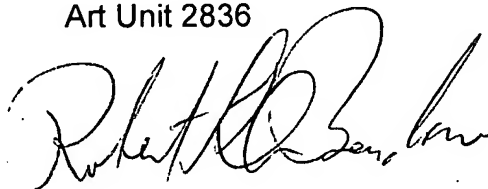
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luis E. Román whose telephone number is (571) 272 – 5527. The examiner can normally be reached on Mon – Fri from 7:15 AM to 3:45 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571) 272-2800 x 36. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from Patent Application Information Retrieval (PAIR) system.

Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LR/030507

Luis E. Román
Patent Examiner
Art Unit 2836



ROBERT L. DEBERADINIS
PRIMARY EXAMINER